

CLAIMS:

1. A manufacturing method of a smectic liquid crystal device comprising the steps of:

(a) inducing an isotropic phase-nematic phase-smectic phase as a phase sequence of a mixture obtained by adding a photopolymerizable monomer liquid crystal exhibiting nematic phase to a smectic liquid crystal; and

(b) irradiating the mixture with UV rays so that the monomer is photopolymerized into a polymer to thereby form a smectic liquid crystal medium with a uniform orientation structure.

2. A manufacturing method of a smectic liquid crystal device according to claim 1, wherein:

the polymer functions as a template that memorizes and stabilizes the orientation structure in the step (b), and a smectic liquid crystal medium with a uniform orientation structure which is completely the same as that before phase transformation, even if transformation into an isotropic phase after the step (b), is performed is obtained directly from the isotropic phase.

3. A smectic liquid crystal device manufactured by the manufacturing method according to claim 1 or 2.